

## Introduction

A portosystemic shunt (PSS) is an anomalous vascular connection between portal venous system and systemic circulation. They can be intra or extrahepatic, congenital or acquired. Only the congenital type represents a surgical condition

## Generalities

Extrahepatic shunts are more common in small breed dogs while intrahepatic are more frequent in large breeds. Some breeds are predisposed and the genetic heritability is demonstrated.

Clinical signs include growth deficits, poor body score, hepatic encephalopathy (ataxia, seizures, head pressing), depression and vomiting. Diagnosis is based on clinical signs plus blood analysis and imaging.

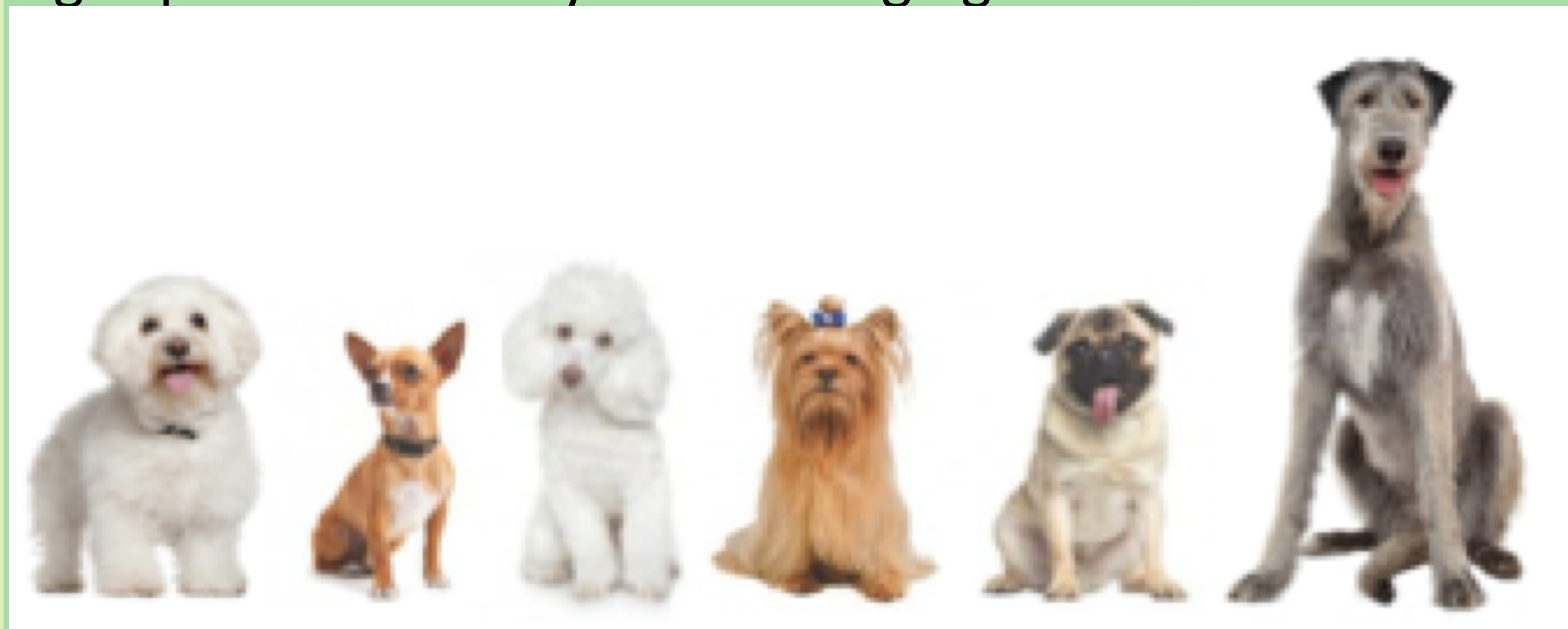


Figure 1. Predisposed dog breeds, from left to right: Maltese, Chihuahua, Toy Poodle, Yorkshire terrier, Pug, Irish wolfhound. Photos from: [www.wellnespetfood.com](http://www.wellnespetfood.com), [www.petbarn.com.au](http://www.petbarn.com.au), [www.adoptapet.com](http://www.adoptapet.com).

## CASE REPORT

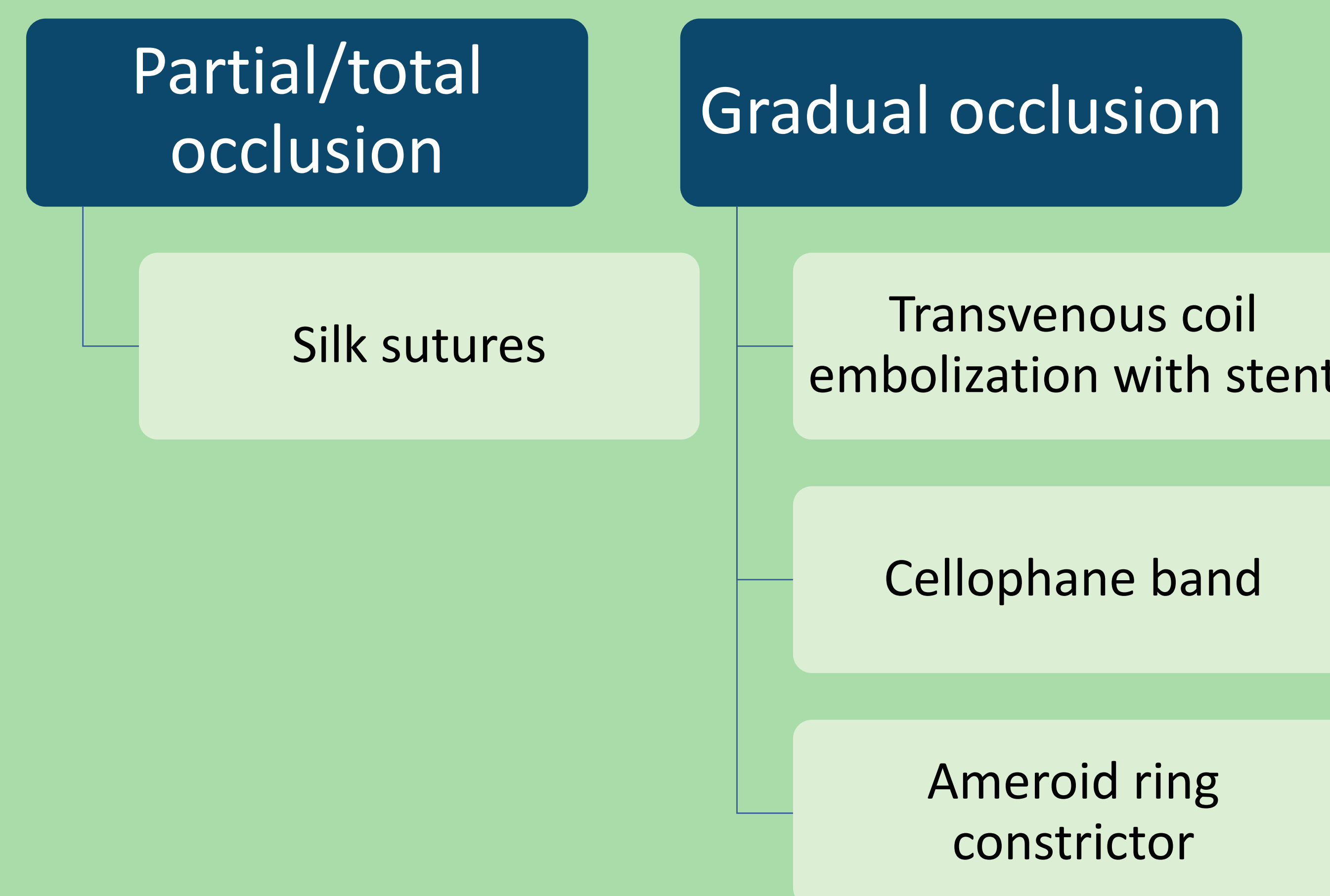
<b>Clinical history</b>	<b>Toy Poodle</b> , male, 1.5 years old with <b>weakness, circling and head pressing</b>
<b>Blood analysis</b>	Hypoglycaemia, hypoalbuminemia, low BUN, <b>high fasting bile acids</b> and <b>high post-prandial bile acids</b>
<b>Imaging</b>	Computed tomography shows an <b>anomalous vessel</b> from left gastrosplenic vein to prehepatic caudal vena cava
<b>Surgical procedure</b>	<b>Cellophane banding</b> of the shunt
<b>Post surgery</b>	3 months post surgery bile acids are normal and <b>there are no neurological signs</b>

## Objectives

The aim of this project is:

- to know more about PSS presentations
- to evaluate the surgical techniques available to solve this anomaly.

## Attenuation methods



## How to know what surgical procedure should we perform?

There is not a single test to determine whether the dog tolerates a total occlusion or not. Prognostic parameters help to decide which method is best for each patient.

### Prognostic parameters

Portal pressure changes through a mesenteric catheter during temporary occlusion of the PSS
Ratio portal vein cranial and caudal to the shunt (CrPV/CaPV) measured on a mesenteric portography
Liver size related to bodyweight measured by ultrasound
Visceral congestion, cianosis and intestinal hypermotility

## Conclusions

- Portosystemic shunt is a complex disease with high variability in its presentation. This results in a different treatment approach in every case.
- Objective prognostic parameters must be used to asses the surgical procedure that fits better in each individual case.
- Further studies must unify prognostic parameters with surgical procedures in order to create standard protocols which will help surgeon's decision.

## Key questions

- Is surgical treatment the only option? Does medical therapy work?
- All attenuation methods have similar outcomes?